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09/896,408	06/28/2001	Christina Woody Mercier	22506-0701	2281

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EXAMINER

JEAN GILLES, JUDE

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 08/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/896,408	MERCIER ET AL.	
	Examiner	Art Unit	
	Jude J Jean-Gilles	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/23/2002</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is responsive to communication filed on 06/28/2001.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 3: Claim 3 recites the limitation " the server or servers " in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, 6, and 20 are rejected under 35 U.S.C. 102(e) as being unpatentable by Lee et al (U.S. 6,601,101).

Regarding claim 1: Lee et al teach a method of creating a data path for a process executing on a server (column 8, lines 8-11) coupled to a storage area network (SAN) (column 20, lines 30-32; fig. 11), that comprises:

parameterizing a set of attributes for a desired data path between the process and a device of the SAN (column 20, lines 58-66; The specifications section of this invention defines “parametizing” to refer to “abstraction of the configuration, implementation and creation steps to identify the desired end product without necessarily specifying the implementation details”. Lee et al teach the step of “regarding the configuration of a switch and its operation in directing communications between client and cluster devices such as servers” (figs. 2A and 2B; column 5, lines 22-24)); and

constructing the data path that provides said set of attributes (column 18, lines 4-7; Although Lee et al teach using the data path for a process executing on a server, Lee et al is silent on how to create the data path. This feature is deemed to be inherent to the Lee et al method as lines 5-7 of column 8 show the client data path is redistributed to the server. The Lee et al method would be inoperative if the data path was not constructed prior to its use in the system).

Regarding claim 2: Lee et al teach the method of claim 1 above wherein said set of attributes includes a predefined template (column 6, lines 42-45; Note that a template in this field of endeavor is defined as “a predesigned spreadsheet that contains formulas, labels, and other elements”. The specifications of this invention define a template to include, for example, “ a list of defined rules and policies which define the storage characteristics and data path characteristics

Art Unit: 2143

...". Lee et al disclose a switch with "logic and a forwarding table" to send a handoff process which is functionally equivalent to a predefined template as it is related to this invention.

Regarding claim 3: Lee et al teach the method of claim 2 above wherein said set of attributes includes a data path owner, application, and the server or servers on which the application is executing (column 18, lines 4-11; column 12, lines 3-5; The applicant fails to explain the meaning of this new limitation: "the data path owner". However, the phrase "client data path" is used in the specifications and the examiner assumes that the client is in fact the owner of the data path. Lee et al teach "a client datapath" (column 18, line 6) which is the basis for anticipation of claim 3. Furthermore, Brown et al disclose an "application program running from a first device" (column 12, line 4) which can be "a database server" (column 8, line 41)).

Regarding claim 4: Lee et al teach the method of claim 2 wherein said pre-defined template specifies a set of performance, availability, and cost metrics for the desired data path (column 19, lines 48-66; column 20, lines 14-16; Note that Lee et al disclose a template which inherently contains "information to improve performance, availability and cost metrics" of the system. Load balancing in this context "refers to devices that contain cost metrics data in the system".

Regarding claim 6: Lee et al teach the method of claim 1 wherein said parameterizing step includes a step of entering a user-defined attribute for inclusion in said set of attributes (column 18, lines 13-15; column 18, lines 31-35. Note that Lee et al disclose “ user and policy changes” and “stored attributes in the user-level database, and are silent on how the user defined attributes are entered. This feature is deemed to be inherent to the Lee et al system as it would be inoperative if the user defined attributes where not entered prior to the changes).

Regarding claim 20: Lee et al teach an apparatus for creating a data path for a process executing on a server (column 8, lines 8-11) coupled to a storage area network (SAN) (column 20, lines 30-32; fig. 11) that comprises of means for parameterizing a set of attributes for a desired data path between the process and a device of the SAN (column 20, lines 58-66; The specifications section of this invention defines “parametizing” to refer to “abstraction of the configuration, implementation and creation steps to identify the desired end product without necessary specifying the implementation details”. Lee et al teach “the configuration of a switch and its operation in directing communications between client and cluster devices such as servers” (figs. 2A and 2B; column 5, lines 22-24)).

Lee et al further teach means, coupled to said parameterizing means, for constructing the data path that provides said set of attributes (column 18, lines 4-7; Although Lee et al teach using the data path for a process executing on a

server, Lee et al are silent on how to create the data path. This feature is deemed to be inherent to the Lee et al method as lines 5-7 of column 8 show the client data path is redistributed to the server. The Lee et al apparatus would be inoperative if the data path was not constructed prior to its use in the apparatus).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (U.S. 6,601,101), in view of Hu et al (U.S. 6,535,518 B1), and further in view of Nolan et al (U.S. 6,640,278 B1).

Regarding claim 5: Lee et al teach a method of parametrizing a set predefined template attributes for constructing candidate data paths. However, Lee et al fail to teach a method wherein said set of performance and availability metrics includes at least one of a number of threads, a security level, and a default volume size and characteristics, default path characteristics. Hu et al (column 7, lines 65-67) disclose the allocation of memory for pending threads. Hu et al (column 9, lines 14-24) further teach a default traffic path and its characteristics. In addition, Hu et al (column 3, lines 55-60) teach a method to retain security level in the metrics through the network. Nolan et al (column 21,

lines 36-51) teach a mirrored image of storage on multiple volumes whereas, the primary drive is the default volume. It would have been obvious for an artisan at the time of applicant's invention to incorporate Lee et al's candidate data paths constructs with Hu et al's threads, default data path, security level and Nolan et al's data volume characteristics to improve system performance.

Hu et al and Nolan et al teach that it is old and well known in the computer networking art to get the advantage of performance improvements by including at least one of a number of threads, a security level, and a default volume size and characteristics, default path characteristics in the metrics. It would have obvious to one of ordinary skill in the art at the time of the invention to incorporate the performance characteristics to get this advantage in a network environment.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (U.S. 6,601,101), in view of Fairchild (U.S. 6,212,560 B1).

Regarding claim 7: Lee et al teach all the limitations of claim 7, but fail to teach the step wherein said entering step includes entry of said user-defined attribute by use of a graphical user interface (GUI) coupled to the SAN.

Fairchild (column 11, lines 18-21) teaches image files such as GIF files that are included in the template that can be used for entry of user attributes. It would have been obvious for an ordinary skill in the art at the time of applicant's invention to combine Lee et al's method of parametrizing template attributes with Fairchild's method for using a GUI in order to improve system configuration.

Fairchild teaches that it is advantageous in the computer networking art to use a GUI within a pre-defined template for a better system configuration. One

Art Unit: 2143

of ordinary skill in the art at the time of the invention would have been motivated to include the GUI in the template to get this advantage in a SAN.

8. Claims 8-10, 12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (U.S. 6,601,101), in view of Dobberpuhl et al (U.S. 6754718).

Regarding claim 8: Lee et al teach all the limitations of claim 8, but fail to teach the steps below which are taught by Dobberpuhl et al.

Dobberpuhl et al teach the steps of:

searching the SAN for a set of candidate devices (column 4, lines 8-13; fig. 2, item 200; Note that the server begins by finding all of the unique paths from the server to the storage arrays which are the candidate devices);

constructing a candidate data path from the server to each candidate device of said set of candidate devices (column 4, lines 13-20; Here, "a coupling between the server (the initiator) and a storage device (the target)" is considered to be a unique data path);

evaluating each said candidate data path against a selection metric to rank said candidate data paths from a best candidate data path to a least best candidate data path according to said selection metric (column 4, lines 36-41; The metric here is functionally equivalent to the fact that the push application queries the target to determine if the target is running a compliant topology program for receiving host attribute information");

selecting said best candidate data path as the data path to be constructed by said constructing step (column 4, lines 41-44).

It would have been obvious for an ordinary skill in the art at the time of applicant's invention to combine Lee et al's method of parametrizing template attributes with Dobberpuhl et al's method for searching, constructing, evaluating and selecting a data path to improve system scheduling and data flow control.

Dobberpuhl et al teach that it is advantageous in the computer networking art to use a candidate data path against a selection metric for better connectivity and efficient data routing. One of ordinary skill in the art at the time of the invention would have been motivated to include the candidate data path to get this advantage in a SAN.

Regarding claim 9: Lee et al teach all the limitations of claim 9, but fail to teach the steps below which are taught by Dobberpuhl et al.

Dobberpuhl et al teach the steps of:

searching the SAN for a set of candidate devices (column 4, lines 8-13; fig. 2, item 200); Note that the server begins by finding all of the unique paths from the server to the storage arrays which are the candidate devices);

constructing a candidate data path from the server to each candidate device of said set of candidate devices (column 4, lines 13-20; Here, "a coupling between the server (the initiator) and a storage device (the target)" is considered to be "a unique data path");

evaluating each said candidate data path against a selection metric to rank said candidate data paths from a best candidate data path to a least best

Art Unit: 2143

candidate data path according to said selection metric (column 4, lines 36-41; the metric here is functionally equivalent to the fact that the push application queries the target to determine if the target is running a compliant topology program for receiving host attribute information”);

selecting said best candidate data path as the data path to be constructed by said constructing step (column 4, lines 41-44).

presenting said ranked candidate data paths to a user for selection (column 5, lines 61-67); and

selecting a user-selected candidate data path as the data path to be constructed by said constructing step (column 5, lines 61-67; Because the data paths are available, visible and accessible to the user, the user can select a data path from the list of candidate data paths);

It would have been obvious for an ordinary skill in the art at the time of applicant's invention to combine Lee et al's method of parametrizing template attributes with Dobberpuhl et al's method for using for searching, constructing, evaluating and selecting a data path to improve system scheduling and data flow control.

Dobberpuhl et al teach that it is advantageous in the computer networking art to use a user-selected candidate data path in a selection metric for better connectivity and efficient data routing. One of ordinary skill in the art at the time of the invention would have been motivated to include the user-selected candidate data path to get this advantage in a SAN.

Regarding claim 10: Lee et al teach a method of parametrizing a set template attributes for constructing candidate data paths. However, Lee et al fails to teach a method wherein said presenting step of claim 9, recommends said best candidate data path for selection by said user.

Dobberpuhl et al (column 4, lines 36-41; fig. 2, item 210) disclose a push application that will query the target to determine host name, host IP address, host attributes so that the user can select the best data path to add flexibility to the process. It would have been obvious for an ordinary skill in the art at the time of applicant's invention to combine Lee et al method for parametrizing a set of template attribute with Dobberpuhl et al's user-oriented data paths selection to improve interaction among the devices of the network.

Dobberpuhl et al teach that it is old and well known in the computer networking art to get the advantage of user interaction by offering a user-oriented selection of ranked data path. One of ordinary skill in the art at the time of the invention would have been motivated to give the user the ability to select a data path from a ranked candidate data paths list, to get this advantage in a network environment.

Regarding claim 12: Lee et al teach a method of parametrizing a set template attributes for constructing candidate data paths. However, Lee et al fails to teach a method wherein said selection metric includes device uptime information.

Dobberpuhl et al (column 5, lines 61-64; fig. 3, items 100, 390) disclose available data paths accessible and visible to a user connection to the SAN. It

would have been obvious for an ordinary skill in the art at the time of applicant's invention to combine Lee et al method for parametrizing a set of template attribute with Dobberpuhl et al's device uptime information to improve reliability of the network.

Dobberpuhl et al teach that it is old and well known in the computer networking art to get the advantage of device uptime information in the selection metrics for better reliability. One of ordinary skill in the art at the time of the invention would have been motivated to avail information on device availability to get this advantage in a network environment.

Regarding claim 18: Lee et al teach a method of parametrizing a set template attributes for constructing candidate data paths. However, Lee et al fails to teach a method wherein said constructed data path includes all physical, logical and security component identification and configuration information sufficient to operably link the process to an identified data volume of the SAN.

Dobberpuhl et al (column 4, lines 56-57; column 5, lines 1-43; fig. 3) disclose a constructed data path that includes all physical, logical , and security component identification and configuration information linked to a data volume in the SAN. It would have been obvious for an ordinary skill in the art at the time of applicant's invention to combine Lee et al method for parametrizing a set of template attribute with Dobberpuhl et al's constructed data path and configuration to improve interaction among the devices of the network.

Dobberpuhl et al teach that it is old and well known in the computer networking art to get the advantage of a constructed data path and configuration

to optimize performance of the system. It would have obvious to one of ordinary skill in the art at the time of the invention to give the user the ability to include a constructed data path and configuration to get this advantage in a network environment.

9. Claims 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (U.S. 6,601,101), in view of Dobberpuhl et al (U.S. 6754718), and further in view of Hu et al (U.S. 6,535,518 B1).

Regarding claim 11: Lee et al teach a method of parametrizing a set template attributes for constructing candidate data paths. Dobberpuhl et al teach selecting ranked candidate data paths to a user for selection. However, both Lee et al and Dobberpuhl et al fail to teach a method wherein said best candidate data path is presented as a default selection at said selecting step

Hu et al (column 9, lines 14-18) disclose the use of a a default selection path to a candidate device. It would have been obvious for an ordinary skill in the art at the time of applicant's invention to combine Lee et al parametrizing of candidate data paths with Dobberpuhl's available candidate data paths and Hu et al's step of offering a best candidate data path as a default selection to improve system data scheduling and routing.

Hu et al teach that it is old and well known in the computer networking art to get the advantage of good flow control mechanism by offering a best candidate data path as a default selection to speed up the configuration process. One of ordinary skill in the art at the time of the invention would have been

motivated to include this default selection data path recommendation to get this advantage in a network environment.

Regarding claim 13: Lee et al teach a method of parametrizing a set template attributes for constructing candidate data paths. Dobberpuhl et al teach selecting ranked candidate data paths to a user for selection. However, both Lee et al and Dobberpuhl fail to teach a method wherein said selection metric includes performance information.

Hu et al (column 9, lines 64-67; column 10, lines 1-26) disclose performance improvements provided by the invention such as higher throughput, less delay, and priority of service. It would have been obvious for an ordinary skill in the art at the time of applicant's invention to combine Lee et al method for parametrizing a set of template attribute with Dobberpuhl et al's selection of ranked candidate data paths and Hu et al's selection metric that includes performance to improve the network.

Hu et al teach that it is old and well known in the computer networking art to get the advantage of performance improvements to enhance the system. One of ordinary skill in the art at the time of the invention would have been motivated to include performance optimization to get this advantage in a network environment.

10. Claims 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (U.S. 6,601,101), in view of Dobberpuhl et al (U.S. 6,754,718), and further in view of Nolan et al (U.S. 6,640,278 B1).

Regarding claim 14: Lee et al teach a method of parametrizing a set template attributes for constructing candidate data paths. Dobberpuhl et al teach selecting ranked candidate data paths to a user for selection. However, both Lee et al and Dobberpuhl et al fail to teach a method wherein said selection metric includes cost calculation.

Nolan et al (column 36, lines 1-2) disclose a “more efficient management to lower the overall \$/GB costs of storage administration” in the metrics. It would have been obvious for an ordinary skill in the art at the time of applicant’s invention to combine Lee et al method for parametrizing a set of template attribute with Dobberpuhl et al selection of ranked candidate data paths and Nolan et al’s cost calculation to flexibility and versatility in the SAN.

Nolan et al teach that it is old and well known in the computer networking art to get the advantage of cost calculation to improve storage management in the system. One of ordinary skill in the art at the time of the invention would have been motivated to include cost calculation in the selection metric to get this advantage in a network environment.

Regarding claim 15: Lee et al teach a method of parametrizing a set template attributes for constructing candidate data paths. Dobberpuhl et al teach selecting ranked candidate data paths to a user for selection. However, both Lee et al and Dobberpuhl fail to teach a method wherein said selection metric includes best SAN practices information.

Nolan et al (column 33, lines 49-58) teach Best Practices SAN information that can be included in network conned devices. The specification of this

Art Unit: 2143

invention discloses Best practices as being “factored in as appropriate for fan out ratios and switch fabric architecture”. Nolan et al teach best practices information discovered in SAN fabric components such as switches, hubs or routers to ensure secure, centralized storage management capabilities”. It would have been obvious for an ordinary skill in the art at the time of applicant’s invention to combine Lee et al method for parametrizing a set of template attribute with Dobberpuhl selection ranked candidate data paths and Nolan et al’s SAN best practices to make the system more manageable.

Nolan et al teach that it is old and well known in the computer networking art to get the advantage of best practice information to make the system more readily adaptable to implementation. One of ordinary skill in the art at the time of the invention would have been motivated to include SAN best practices in the selection metric to get this advantage in a network environment.

Regarding claim 16: Lee et al teach a method of parametrizing a set template attributes for constructing candidate data paths. Dobberpuhl et al teach selecting ranked candidate data paths to a user for selection. However, both Lee et al and Dobberpuhl et al fail to teach a method wherein said selection metric includes learned state and usage information of the SAN.

Nolan et al (column 19, Export Table) disclose the learned states and the usage information of the SAN in the metrics. It would have been obvious for an ordinary skill in the art at the time of applicant’s invention to combine Lee et al method for parametrizing a set of template attribute with Dobberpuhl selection

ranked candidate data paths and Nolan et al's teaching of the learned states of the SAN.

Nolan et al teach that it is old and well known in the computer networking art to get the advantage of learned states and usage information to improve the configuration of the SAN. One of ordinary skill in the art at the time of the invention would have been motivated to include learned states and usage information in the selection metric to get this advantage in a network environment.

Regarding claim 17: Lee et al teach a method of parametrizing a set template attributes for constructing candidate data paths. Dobberpuhl et al teach selecting ranked candidate data paths to a user for selection. However, both Lee et al and Dobberpuhl et al fail to teach a method wherein said searching step prequalifies a subset of candidate data paths by finding those candidates that satisfy a pre-created policy prior to application of said evaluating step.

Nolan et al (column 15, lines 60-67; column 16, lines 1-12; fig. 2) disclose a mirror management data path task that offers a subset of candidate data paths that satisfy a pre-created policy. The plurality of drives (primary, secondary, tertiary, and standby etc.) allow the creation of a prequalified subset of candidate data paths. It would have been obvious for an ordinary skill in the art at the time of applicant's invention to combine Lee et al method for parametrizing a set of template attribute with Dobberpuhl et al selecting ranked candidate data paths and Nolan et al's subset of candidate data paths in the SAN.

Nolan et al teach that it is old and well known in the computer networking art to get the advantage of a prequalified subset of candidate data paths to improve the configuration of the SAN. One of ordinary skill in the art at the time of the invention would have been motivated to include prequalified subset of candidate data paths in the searching step to get this advantage in a network environment.

11. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nolan et al (U.S. 6,640,278 B1), in view of Dobberpuhl et al (U.S. 6754718).

Regarding claim 19: Nolan discloses a method to discover, by use of a data path engine coupled to the SAN, processes that are operable on a server coupled to the SAN (column 35, lines 48-55; fig. 3; column 8, lines 25-24; Note that the data path engine here is called a data mover engine and that the processes and event are maintained in the storage server). Dolan et al further teach a step to discover, by use of said data path engine coupled to the SAN, devices that are included in the SAN (column 35, lines 48-55; fig. 3, items 1330-1339). However, Dolan et al differ from the claimed invention in that Dolan et al do not disclose a step to respond, by use of said data path engine coupled to the SAN, to a data path construction request from a user by providing said user with an interface to accept a set of attributes for a desired data path for one of said discovered processes. Dobberpuhl et al (fig 3, items 130, 370; column 4, 62-67) teach a management client computer with a GUI that can handle data path construction request from a client).

Dolan et al further disclose constructing, by use of the DataPath Engine coupled to the SAN, the data path that provides said set of attributes (column 35, lines 48-55; Note that the core operating system that support the data engine is built to storage asset allocation and utilization). Accordingly, it would have been obvious for an artisan to incorporate the management client computer of Dobberpuhl et al into the data path engine that couples the SAN of Dolan et al to provide the user with an interface to accept a set of attributes for a desired data path for processing. Furthermore, a similar arrangement can be provided so that the processes coming from the user are operable on the server.

Nolan et al teach that it is old and well known in the computer networking art to get the advantage of discovering and responding to processes through the use of an engine data path to enhance configuration of the SAN. One of ordinary skill in the art at the time of the invention would have been motivated to couple the management client computer into the data path to get this advantage in a network environment.

Art Unit: 2143

Conclusion

18. Any inquiry concerning this communication or earlier communications from examiner should be directed to Jude Jean-Gilles whose telephone number is (703) 305-0269. The examiner can normally be reached on Monday-Thursday and every other Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley, can be reached on (703) 308-5221. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3719.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.


Jude Jean-Gilles

Patent Examiner

Art Unit 2143

JJG

August 17, 2004


DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100